

SHORT COMMUNICATION

A new species of *Xysticus* (Araneae, Thomisidae) from Alberta, Canada

Charles D. Dondale: Biodiversity, Research Branch, Agriculture & Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario K1A 0C6, Canada. E-mail: cjdondale@horizontech.ca

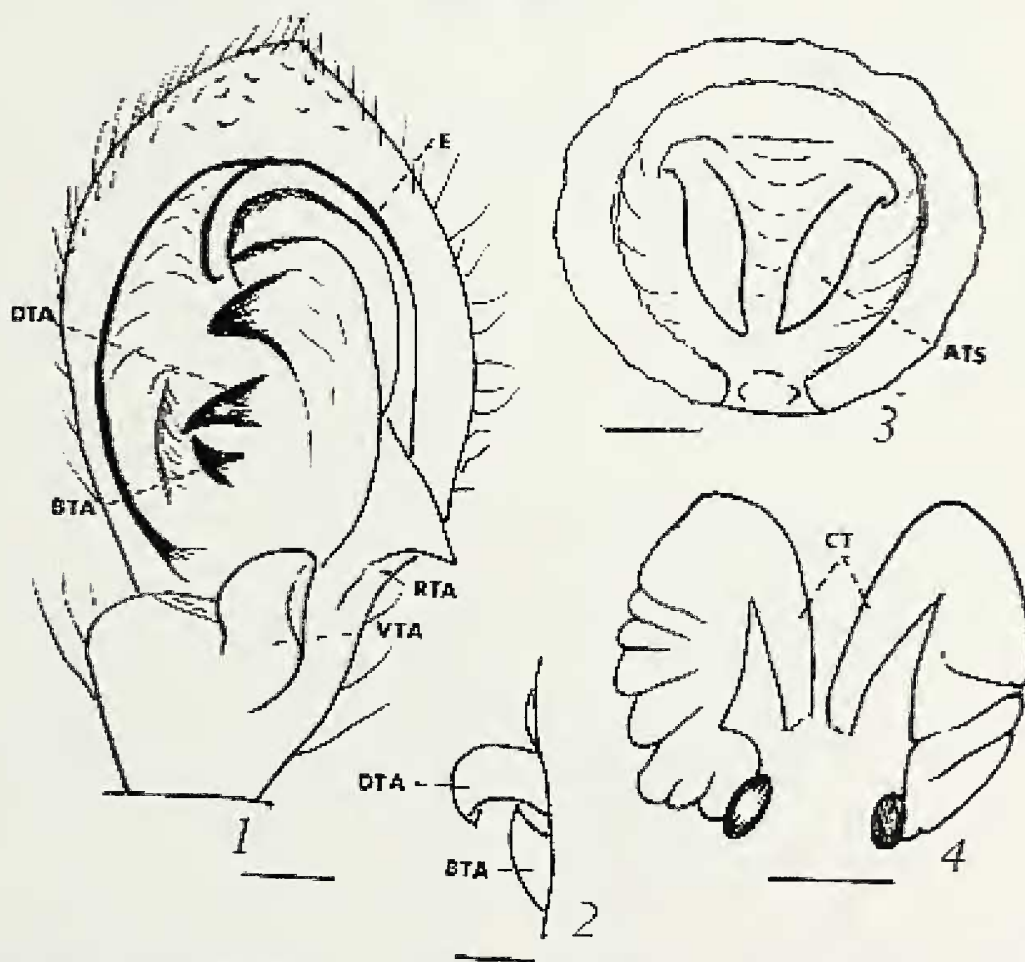
Abstract. A new species of the crab-spider genus *Xysticus* (Thomisidae), *X. albertensis*, is described from northern Alberta, Canada. Specimens are compared with those of three species that closely resemble them and live in the same geographical region, namely, *X. chippewa* Gertsch 1953, *X. canadensis* Gertsch 1934, and *X. britcheri* Gertsch 1934.

Keywords: Taxonomy, crab spider, western Canada

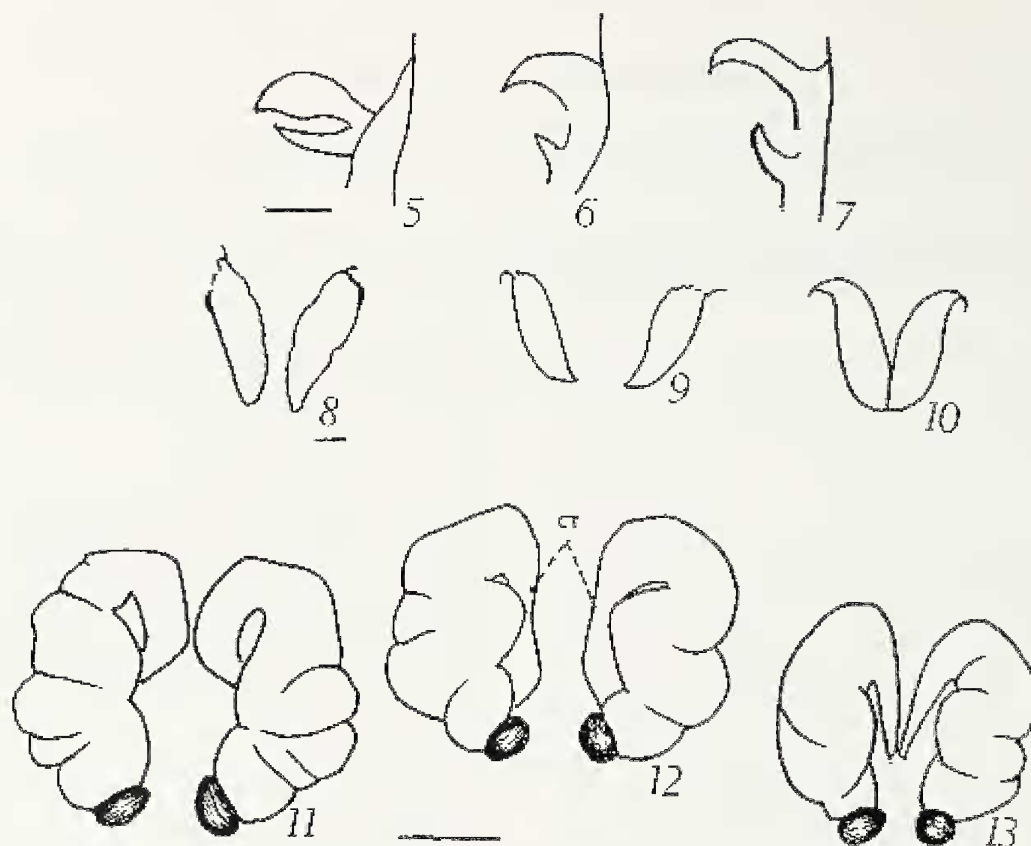
The crab-spider genus *Xysticus* C.L. Koch 1835 was established for the widespread Palearctic species *X. andax* (Schränk 1803), and is currently regarded as a major world entity comprising more than 300 species (Platnick 2007). North America is home to nearly 70 species, a possible six of which are regarded as Holarctic (Dondale 2005; Dondale et al. 2006). The purpose of the present contribution is to describe a new species from northern Alberta, Canada, individuals of

which closely resemble those of three species that are found in the same region, namely, *X. chippewa* Gertsch 1953, *X. canadensis* Gertsch 1934, and *X. britcheri* Gertsch 1934.

Specimens are lodged in the following institutions: Canadian National Collection of Insects & Arachnids, Ottawa, Ontario, Canada (CNC); Strickland Entomological Museum, University of Alberta, Edmonton, Alberta, Canada (SEM).



Figures 1–4.—*Xysticus albertensis* new species: 1. Palpus of holotype, ventral view; 2. Tegular apophyses of same, retrolateral view; 3. Epigynum of paratype, ventral view; 4. Spermathecae and copulatory tubes of same, dorsal view. ATS, atrial sclerite; BTA, basal tegular apophysis; CT, copulatory tube; DTA, distal tegular apophysis; E, embolus; RTA, retrolateral tibial apophysis; VTA, ventral tibial apophysis. Scale bar for Figures 1, 3, 4 = 0.20 mm, for Figure 2 = 0.08 mm.



Figures 5–13.—5–7. Tegular apophyses of male palpi, retrolateral view: 5. *Xysticus chippewa* Gertsch; 6. *X. canadensis* Gertsch; 7. *X. britcheri* Gertsch. 8–10. Atrial sclerites of female epigyna, ventral view: 8. *X. chippewa*; 9. *X. canadensis*; 10. *X. britcheri*. 11–13. Spermathecae and copulatory tubes, dorsal view: 11. *X. chippewa*; 12. *X. canadensis*; 13. *X. britcheri*. CT, copulatory tubes. Scale bar for Figures 5–7 = 0.08 mm, for Figures 8–10 = 0.04 mm, for Figures 11–13 = 0.20 mm.

Family Thomisidae Sundevall 1833

Genus *Xysticus* C.L. Koch 1835

Type species.—*Aranea audax* Schrank, 1803, original designation

Xysticus albertensis new species

Figs. 1–4

"*Xysticus* sp. 1": Nordstrom & Buckle 2004:9.

Type specimens.—Holotype male, paratype male, and paratype female from the margin of a small lake unofficially named "Esker Lake" by the collector, situated between Colin Lake (59°34'N, 110°08'W) and Woodman Lake, in Colin-Cornwall Wildland Park, Alberta, Canada, 6–9 July 2002, Ted Johnson (CNC). Paratypes: 1 male, 1 female, with same data (CNC); 2 males, with same data (SEM).

Etymology.—The name of the new species is derived from that of the Canadian province in which the type-series was collected.

Diagnosis.—Individuals of *X. albertensis* new species closely resemble those of *X. chippewa*, but also bear some resemblance to those of *X. canadensis* and *X. britcheri*, the last three of which are currently treated as Holarctic. All four are characterized by the possession of a smoothly curved distal tegular apophysis that is neither angulate nor "heeled" (Figs. 1, 2, 5–7). Males of *X. albertensis* are distinguished from those of the other three species by the basally stout and abruptly hooked distal tegular apophysis (compare Fig. 2 with Figs. 5–7). Also, the two tegular apophyses in male *X. albertensis* are narrowly separated, whereas these structures in the other three species are more separate. Females of the four aforementioned species are characterized by possession of posteriorly converging atrial sclerites (Figs. 3, 8–10). Individuals of *X.*

albertensis differ from those of *X. chippewa* and *X. canadensis* by the possession of slender copulatory tubes (compare Fig. 4 with Figs. 11, 12) and from those of *X. britcheri* by thicker copulatory tubes (compare Fig. 4 with Fig. 13). The atrial sclerites of *X. albertensis* are only moderately separated posteriorly (Fig. 3), whereas those of female *X. canadensis* are well separated (Fig. 9), and those of *X. britcheri* are touching (Fig. 10). Individuals of both sexes of *X. albertensis* are predominantly dark brown (much as in *X. britcheri*), whereas those of *X. chippewa* and of *X. canadensis* are much paler.

Description.—*Holotype male*: (Figs. 1, 2). Total length 3.98 mm; carapace 2.49 mm long, 2.16 mm wide. Carapace brown on yellowish background. Legs similar to carapace in color, paler distally; femur I with 8 erect macrosetae on prolateral surface. Sternum with many small round reddish brown conjoined spots. Abdomen dorsally with extensive dark brown areas; venter pale, with scattered reddish spots. Palpal tibia with stout tapered retrolateral apophysis and thick angular ventral apophysis; embolus moderately thick basally, slender distally, with free part separated from tegulum by distinct broad space distal to tegular apophyses; distal tegular apophysis thick at base, abruptly curved at tip, tapered to sharp point; basal tegular apophysis short, curved.

Paratype female: (Figs. 3, 4). Total length 5.31 mm; carapace 2.41 mm long, 2.16 mm wide. Color much as in male, but somewhat paler, with eye area and median area of carapace creamy white; abdomen with only a few reddish or dark brown spots. Leg macrosetae as in male. Epigynum with shallow atrium; atrial sclerites converging posteriorly, moderately separated at posterior end (Fig. 3). Copulatory tubes approximately two-thirds as long as spermathecae; spermathecae shallowly lobed (Fig. 4).

Variation.—Males, $n = 3$: Total length 3.82–4.32 mm; carapace 2.49–2.57 mm long, 1.99–2.22 mm wide.

Distribution.—Known only from the type locality.

ACKNOWLEDGMENTS

Donald J. Buckle first recognized *Xysticus albertensis* as new to science and kindly passed the specimens to the author for description.

LITERATURE CITED

- Dondale, C.D. 2005. Thomisidae. Pp. 246–247. In *Spiders of North America: an identification manual*. (D. Ubick, P. Paquin, P.E. Cushing & V. Roth, eds.). American Arachnological Society.
- Dondale, C.D., T. Kronestedt & D.J. Buckle. 2006. Confirmation of the presence of *Xysticus chippewa* in Europe (Araneae, Thomisidae). *Bulletin of the British Arachnological Society* 13:361–369.
- Nordstrom, W. & D. Buckle. 2004. Spider records from Colin-Cornwall Lakes Provincial Park. Alberta Ministry of Community Development, Edmonton, Alberta, Canada. 31 pp.
- Platnick, N.I. 2007. The World Spider Catalog, Version 8.0. American Museum of Natural History, New York. Online at <http://research.amnh.org/entomology/spiders/catalog/index.html>.

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